

Smac (V-17): sc-12683

BACKGROUND

The activation of caspases is a key regulatory step in apoptosis. Once cytochrome c is released from the mitochondria into the cytosol, it binds Apaf-1 to form an oligomeric cytochrome c/Apaf-1 complex, which induces caspase activation. Inhibitors of Apoptosis proteins (IAPs), are a family of proteins that regulate the cytochrome c/Apaf-1 caspase activating pathway. Like cytochrome c, Smac (for second mitochondria-derived activator of caspase, also designated DIABLO in mouse for direct IAP binding protein with low PI) promotes caspase activation in the cytochrome c/Apaf-1/caspase-9 pathway by binding IAPs and preventing them from inhibiting caspases. In healthy cells, Smac is a mitochondrial protein, but when cells undergo apoptosis, Smac is released into the cytosol.

CHROMOSOMAL LOCATION

Genetic locus: DIABLO (human) mapping to 12q24.31; Diablo (mouse) mapping to 5 F.

SOURCE

Smac (V-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of mature Smac of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-12683 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Smac (V-17) is recommended for detection of precursor and mature Smac of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Smac (V-17) is also recommended for detection of precursor and mature Smac in additional species, including equine and porcine.

Suitable for use as control antibody for Smac siRNA (h): sc-36505, Smac siRNA (m): sc-36506, Smac shRNA Plasmid (h): sc-36505-SH, Smac shRNA Plasmid (m): sc-36506-SH, Smac shRNA (h) Lentiviral Particles: sc-36505-V and Smac shRNA (m) Lentiviral Particles: sc-36506-V.

Molecular Weight of Smac: 21/27 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Caki-1 cell lysate: sc-2224 or DU 145 cell lysate: sc-2268.

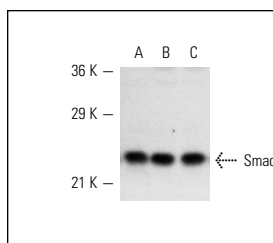
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

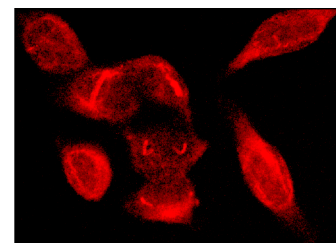
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



Smac (V-17): sc-12683. Western blot analysis of Smac expression in HeLa (A), Caki-1 (B) and DU 145 (C) whole cell lysates.



Smac (V-17): sc-12683. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

- Rashmi, R., et al. 2003. Human colon cancer cells differ in their sensitivity to curcumin-induced apoptosis and heat shock protects them by inhibiting the release of apoptosis-inducing factor and caspases. *FEBS Lett.* 538: 19-24.
- Choi, S., et al. 2005. Bax and Bak are required for apoptosis induction by sulforaphane, a cruciferous vegetable-derived cancer chemopreventive agent. *Cancer Res.* 65: 2035-2043.
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- Dursun, B., et al. 2006. Caspases and calpain are independent mediators of cisplatin-induced endothelial cell necrosis. *Am. J. Physiol. Renal Physiol.* 291: F578-F587.
- Schön, M., et al. 2008. KINK-1, a novel small-molecule inhibitor of IKKβ, and the susceptibility of melanoma cells to antitumoral treatment. *J. Natl. Cancer Inst.* 100: 862-875.
- Susini, L., et al. 2008. TCTP protects from apoptotic cell death by antagonizing Bax function. *Cell Death Differ.* 15: 1211-1220.
- Hammami, I., et al. 2009. Chronic crude garlic-feeding modified adult male rat testicular markers: mechanisms of action. *Reprod. Biol. Endocrinol.* 7: 65.
- Ramachandiran, S, et al. 2012. The Smac mimetic RMT5265.2HCL induces apoptosis in EBV and HTLV-I associated lymphoma cells by inhibiting XIAP and promoting the mitochondrial release of cytochrome C and Smac. *Leuk. Res.* 36: 784-790.



Try **Smac (C-10): sc-393118** or **Smac (56): sc-136302**, our highly recommended monoclonal alternatives to Smac (V-17).